

WHAT IS CLAIMED IS:

1. A method of splicing a conveyor belt having vulcanized rubber with steel strands embedded in the vulcanized rubber, comprising the steps of:

- 5 (A) exposing a plurality of strands at two belt ends; and  
(B) applying a vulcanizable rubber composition to the exposed strands to form a spliced joint between the two belt ends, said vulcanizable rubber composition comprising 100 parts by weight of rubber, said rubber comprising from about 1 to about 40 parts by weight of polyoctenamer.

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2. The method of claim 1, wherein said vulcanizable rubber composition further comprises at least one additional rubber selected from the group consisting of polychloroprene, poly-epichlorohydrin, polyisobutylene, halogenated-polyisobutylene, natural rubber, polyisoprene, polybutadiene, styrene-butadiene, and blends thereof.

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3. The method of claim 1, wherein said vulcanizable rubber composition further comprises at least one additional rubber selected from styrene-butadiene rubber and natural rubber.

20 4. The method of claim 1, wherein said vulcanizable rubber composition comprises from about 5 to about 30 parts by weight of polyoctenamer.

5. The method of claim 1, wherein said step of applying a vulcanizable rubber composition to said strands comprises the steps of :

- 25 (A) providing two arrays of unvulcanized strips of said vulcanizable rubber composition, each strip of rubber having a preformed cross-sectional profiles, one array of strips being an array of bottom strips having a plurality of substantially parallel strand receiving grooves located on a first side or a second side of the strips, the other array of strips being an array of top strips;  
30 (B) placing the exposed strands of the belt ends being joined in the grooves of the one array of bottoms strip;  
(C) placing the array of top strips overlying the array of bottom strips; and

(D) vulcanizing the strips together and to strands thereby forming the spliced joint.

5 6. The method of claim 1, wherein part of said vulcanized rubber remains on the exposed strands.

7. The method of claim 1, wherein said vulcanizable rubber composition further comprises from about 20 to about 10 to about 250 parts by weight of a filler selected from carbon black and silica.

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8. The method of claim 1, wherein said splice joint has a dynamic adhesion rating of at least 50,000 cycles, based on AS-1333, Appendix K.

15 9. The method of claim 1, wherein said splice joint has a dynamic adhesion rating of at least 75,000 cycles, based on AS-1333, Appendix K.

10. The method of claim 1, wherein said splice joint has a dynamic adhesion rating of at least 100,000 cycles, based on AS-1333, Appendix K.

20 11. A conveyor belt having at least one spliced joint comprising a vulcanizable rubber composition comprising 100 parts by weight of rubber, said rubber comprising from about 1 to about 40 parts by weight of polyoctenamer.

25 12. The conveyor belt of claim 11, wherein said vulcanizable rubber composition further comprises at least one additional rubber selected from the group consisting of polychloroprene, poly-epichlorohydrin, polyisobutylene, halogenated-polyisobutylene, natural rubber, polyisoprene, polybutadiene, styrene-butadiene, and blends thereof.

30 13. The conveyor belt of claim 11, wherein said vulcanizable rubber composition further comprises at least one additional rubber selected from styrene-butadiene rubber and natural rubber.

14. The conveyor belt of claim 11, wherein said vulcanizable rubber composition comprises from about 5 to about 30 parts by weight of polyoctenamer.

5 15. The conveyor belt of claim 11, wherein said splice joint has a dynamic adhesion rating of at least 50,000 cycles, based on AS-1333, Appendix K.

16. The conveyor belt of claim 11, wherein said splice joint has a dynamic adhesion rating of at least 75,000 cycles, based on AS-1333, Appendix K.

10 17. The conveyor belt of claim 11, wherein said splice joint has a dynamic adhesion rating of at least 100,000 cycles, based on AS-1333, Appendix K.